

CLAIMS

1. A method of manufacturing a circuit board, comprising:

providing a pre-preg sheet including a substrate and a resin impregnated in the substrate, the pre-preg sheet having a first surface and a
5 second surface opposite to the first surface;

placing a first metal foil on the first surface of the pre-preg sheet to provide a laminated body;

putting the laminated body in a heating device having a temperature maintained at a temperature close to a softening temperature
10 of the resin;

compressing the laminated body at the temperature at a predetermined pressure; and

bonding the first metal foil to the pre-preg sheet of the laminated body and hardening the resin.

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2. The method according to claim 1, wherein said compressing the laminated body comprises compressing the pre-preg sheet at a compression rate smaller than 10%.

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3. The method according to claim 1, further comprising

taking the laminated body out of the heating device after said compressing the laminated body at the temperature at the predetermined pressure.

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4. A method of manufacturing a circuit board, comprising:

preparing a pre-preg sheet including a substrate and a resin impregnated in the substrate, the pre-preg sheet having a first surface and a

second surface opposite to the first surface;

placing a first metal foil on the first surface of the pre-preg sheet at a temperature close to a softening temperature of the resin to provide a laminated body;

5 compressing the laminated body; and

bonding the first metal foil to the pre-preg sheet of the laminated body and hardening the resin.

5. The method according to claim 4, wherein said compressing the
10 laminated body comprises compressing the pre-preg sheet at a compression rate smaller than 10%.

6. A method of manufacturing a circuit board, comprising:

preparing a pre-preg sheet including a substrate and a resin
15 impregnated in the substrate, the pre-preg sheet having a first surface and a second surface opposite to the first surface;

placing a first metal foil on the first surface of the pre-preg sheet to provide a laminated body;

compressing the laminated body at a temperature close to a
20 softening temperature of the resin at a predetermined pressure;

cooling the laminated body to have a temperature not higher than the softening temperature of the resin after said compressing the laminated body at the first pressure; and

bonding the first metal foil to the pre-preg sheet of the laminated
25 body and hardening the resin.

7. The method according to claim 6, wherein said compressing the

laminated body at the first pressure comprises compressing the pre-preg sheet at a compression rate smaller than 10%.

8. The method according to any one of claims 1 to 7, wherein said
5 placing the first metal foil on the first surface of the pre-preg sheet to provide the laminated body comprises placing a second metal foil on the second surface of the pre-preg sheet to provide the laminated body.

9. The method according to any one of claims 1 to 7, further comprising:
10 forming a through-hole penetrating the pre-preg sheet from the first surface to the second surface of the pre-preg sheet; and
filling the through-hole with a conductive paste.

10. The method according to claim 9,
15 wherein the conductive paste includes a conductive filler and a thermosetting resin, and
wherein a softening temperature of the thermosetting resin is lower than the softening temperature of the resin of the pre-preg sheet.

20 11. The method according to any one of claims 1 to 7, wherein the pre-preg sheet is in a B-stage and compressive.

12. The method according to any one of claims 1 to 7, wherein the
substrate of the pre-preg sheet comprises a non-woven fabric of aromatic
25 polyamide fiber.

13. The method according to any one of claims 1 to 7, wherein the

substrate of the pre-preg sheet comprises a glass fiber.

14. The method according to any one of claims 1 to 7, wherein said bonding the first metal foil to the pre-preg sheet of the laminated body and
5 hardening the resin comprises:

heating the laminated body at a second temperature higher than a first temperature close to the softening temperature of the resin; and

heating the laminated body at a third heating temperature higher than the second heating temperature after said heating the laminated body
10 at the second temperature.

15. The method according to claim 14, wherein the second heating temperature is within a flowing/hardening range of the resin.

15 16. The method according to claim 14, wherein the third heating temperature is a hardening temperature of the resin.

17. The method according to one of claim 1 to claim 7, wherein the resin of the pre-preg sheet has a softening range from 50°C to 130°C.